

WHAT IS CLAIMED IS:

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1. A remote management system for performing remote management of a plurality of electronic apparatuses via a communication line and an intermediary apparatus by a managing apparatus,
10 wherein:

the managing apparatus comprises:
a first storage part storing first software with which second software of each of the electronic apparatuses is overwritten to be updated;
15 and

a software transmitting part that transmits the first software to the intermediary apparatus via the communication line;

the intermediary apparatus comprises:
20 a second storage part;
a software writing part that writes the first software to the second storage part when acquiring the first software from the managing apparatus; and
25 a software transmitting part that

transmits the first software stored in the second storage part to one of the electronic apparatuses which one requires the second software thereof to be updated; and

5 the electronic apparatuses each comprises:

 a non-volatile storage part storing the second software controlling an operation of the electronic apparatus; and

10 a software updating part that updates the second software stored in the non-volatile storage part based on the first software when receiving the first software from the intermediary apparatus.

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2. The remote management system as claimed in claim 1, wherein, when two or more of the 20 electronic apparatuses require the second software thereof to be updated, the software transmitting part of the intermediary apparatus transmits the first software stored in the second storage part to each of the two or more of the electronic apparatuses.

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3. The remote management system as claimed in claim 2, wherein

the first software stored in the storage part of the managing apparatus comprises software 5 programs of different types;

the second software differs in type between two or more of the electronic apparatuses; and

the software transmitting part of the intermediary apparatus transmits two or more of the 10 software programs of the first software to the two or more of the electronic apparatuses in accordance with the types of the second software thereof.

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4. The remote management system as claimed in claim 1, wherein:

the managing apparatus further comprises: 20

a schedule generating part that generates an update date and time for updating the second software; and

a schedule transmitting part that transmits the generated update date and time to the 25 intermediary apparatus;

the software transmitting part of the managing apparatus transmits the first software stored in the first storage part to the intermediary apparatus at a request thereof; and

5 the intermediary apparatus further comprises:

 a schedule writing part that writes the update date and time to the second storage part when receiving the update date and time from the managing 10 apparatus; and

 a transmission requesting part that requests the managing apparatus to transmit the first software to the intermediary apparatus when the update date and time stored in the second storage 15 part is reached.

20 5. The remote management system as claimed in claim 4, wherein:

 the intermediary apparatus further comprises:

 a transmission rate measuring part that 25 measures a first transmission rate between the

intermediary apparatus and the managing apparatus and
a second transmission rate between the intermediary
apparatus and the one of the electronic apparatus
which one requires the second software thereof to be
5 updated; and

a transmission rate reporting part that
reports the first and second transmission rates to
the managing apparatus; and

the schedule generating part of the managing
10 apparatus generates the update date and time based on
an amount of data of the first software stored in the
first storage part and the first and second
transmission rates received from the intermediary
apparatus.

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6. The remote management system as claimed
20 in claim 4, wherein:

the software transmitting part of the
intermediary apparatus comprises a communication
requesting part that makes a request to the one of
the electronic apparatuses for communication with the
25 intermediary apparatus before transmitting the first

software stored in the second storage part to the one
of the electronic apparatuses, and transmits the
first software stored in the second storage part to
the one of the electronic apparatuses when receiving
5 a response to said request therefrom; and

each of the electronic apparatuses comprises
a response part that responds to said request when
receiving said request from the intermediary
apparatus.

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7. The remote management system as claimed
15 in claim 4, wherein:

the software transmitting part of the
intermediary apparatus comprises a communication
requesting part that makes a request for the one of
the electronic apparatuses to communicate with the
20 intermediary apparatus before transmitting the first
software stored in the second storage part to the one
of the electronic apparatuses; and

each of the electronic apparatuses
comprises:

25 a deferment period managing part that

manages a performance deferment period from when said request from the intermediary apparatus is received to when it becomes possible to update the second software; and

5 a response part that responds to said request after passage of the performance deferment period.

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8. The remote management system as claimed in claim 4, wherein:

the intermediary apparatus further
15 comprises:

a status checking part that checks a status of the one of the electronic apparatuses; and an update date and time changing part that changes the update date and time stored in the 20 second storage part so that a start of the updating of the second software is deferred for a predetermined period of time when it is determined based on a result of the checking by the status checking part that the one of the electronic 25 apparatuses is prevented from starting the updating

of the second software immediately.

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9. The remote management system as claimed
in claim 4, wherein the intermediary apparatus
further comprises an update date and time changing
part that changes the update date and time stored in
10 the second storage part so that a start of the
updating of the second software is deferred for a
predetermined period of time when receiving a request
to defer the updating of the second software from
outside the intermediary apparatus.

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10. The remote management system as claimed
20 in claim 1, wherein:
the managing apparatus further comprises a
schedule generating part generating a transmission
date and time for transmitting the first software and
an update date and time for updating the second
25 software;

the software transmitting part of the managing apparatus transmits the first software stored in the first storage part and the generated update date and time to the intermediary apparatus 5 when the generated transmission date and time is reached;

the software writing part of the intermediary apparatus writes the first software and the update date and time to the second storage part 10 when receiving the first software and the update date and time from the managing apparatus; and

the software transmitting part of the intermediary apparatus transmits the first software stored in the second storage part to the one of the 15 electronic apparatuses which one requires the second software thereof to be updated when the update date and time stored in the storage part is reached.

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11. The remote management system as claimed in claim 10, wherein:

the intermediary apparatus further 25 comprises:

a transmission rate measuring part
measuring a first transmission rate between the
intermediary apparatus and the managing apparatus and
a second transmission rate between the intermediary
5 apparatus and the one of the electronic apparatus
which one requires the second software thereof to be
updated; and

a transmission rate reporting part
reporting the first and second transmission rates to
10 the managing apparatus; and

the schedule generating part of the managing
apparatus generates the transmission date and time
and the update date and time based on an amount of
data of the first software stored in the first
15 storage part and the first and second transmission
rates received from the intermediary apparatus.

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12. The remote management system as claimed
in claim 10, wherein:

the software transmitting part of the
intermediary apparatus comprises a communication
25 requesting part that makes a request to the one of

the electronic apparatuses for communication with the intermediary apparatus before transmitting the first software stored in the second storage part to the one of the electronic apparatuses, and transmits the
5 first software stored in the second storage part to the one of the electronic apparatuses when receiving a response to said request therefrom; and
each of the electronic apparatuses comprises a response part that responds to said request when
10 receiving said request from the intermediary apparatus.

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13. The remote management system as claimed in claim 10, wherein:

the software transmitting part of the intermediary apparatus comprises a communication
20 requesting part that makes a request for the one of the electronic apparatuses to communicate with the intermediary apparatus before transmitting the first software stored in the second storage part to the one of the electronic apparatuses; and
25 each of the electronic apparatuses

comprises:

a deferment period managing part that manages a performance deferment period from when said request from the intermediary apparatus is received 5 to when it becomes possible to update the second software; and

a response part that responds to said request after passage of the performance deferment period.

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14. The remote management system as claimed 15 in claim 10, wherein:

the intermediary apparatus further comprises:

a status checking part that checks a status of the one of the electronic apparatuses; and 20 an update date and time changing part that changes the update date and time stored in the second storage part so that a start of the updating of the second software is deferred for a predetermined period of time when it is determined 25 based on a result of the checking by the status

checking part that the one of the electronic apparatuses is prevented from starting the updating of the second software immediately.

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15. The remote management system as claimed in claim 10, wherein the intermediary apparatus further comprises an update date and time changing part that changes the update date and time stored in the second storage part so that a start of the updating of the second software is deferred for a predetermined period of time when receiving a request 15 to defer the updating of the second software from outside the intermediary apparatus.

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16. The remote management system as claimed in claim 1, wherein:

the intermediary apparatus comprises a status checking part that checks a status of the one 25 of the electronic apparatuses; and

the software transmitting part of the intermediary apparatus comprises an updating necessity determining part that determines whether the updating of the second software of the one of the 5 electronic apparatuses has normally ended based on a result of the checking by the status checking part, and repeats the transmission of the first software stored in the second storage to the one of the electronic apparatuses until the updating necessity 10 determining part determines that the updating of the second software of the one of the electronic apparatuses has normally ended.

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17. The remote management system as claimed in claim 16, wherein:

the updating necessity determining part of 20 the intermediary apparatus determines that the updating of the second software of the one of the electronic apparatuses has normally ended when receiving a power-on report indicating that power is turned on from the one of the electronic apparatuses; 25 and

each of the electronic apparatuses
comprises:

5 a restart commanding part that causes
the electronic apparatus to restart after the
updating of the second software by the software
updating part is completed; and

10 a power-on reporting part that reports
to the intermediary apparatus that the power is
turned on after the restarting of the electronic
apparatus.

15 18. The remote management system as claimed
in claim 16, wherein the software transmitting part
of the intermediary apparatus comprises a part that
stops the transmission of the first software to the
one of the electronic apparatuses when the
20 transmission is prevented from being completed by a
preset expiration date and time.

19. The remote management system as claimed in claim 1, wherein the software updating part of each of the electronic apparatuses comprises a part that cancels the updating of the second software when 5 receiving a request to cancel the updating of the software from outside the electronic apparatus.

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20. An intermediary apparatus connected to a managing apparatus via a communication line so as to control communication between the managing apparatus and one or more electronic apparatuses 15 managed remotely by the managing apparatus, the intermediary apparatus comprising:
a storage part;
a software writing part that writes first software to the storage part when receiving the first 20 software from the managing apparatus; and
a software transmitting part that transmits the first software stored in the storage part to one of the electronic apparatuses each storing second software therein which one requires the second 25 software to be updated.

21. The intermediary apparatus as claimed
in claim 20, wherein, when two or more of the
electronic apparatuses require the second software
stored therein to be updated, the software
5 transmitting part transmits the first software to
each of the two or more of the electronic apparatuses.

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22. The intermediary apparatus as claimed
in claim 21, wherein
the first software comprises software
programs of different types;
15 the second software differs in type between
two or more of the electronic apparatuses; and
the software transmitting part transmits two
or more of the software programs of the first
software to the two or more of the electronic
20 apparatuses in accordance with the types of the
second software thereof.

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23. The intermediary apparatus as claimed in claim 20, further comprising:

a schedule writing part that writes an update date and time to the storage part when 5 receiving the update date and time from the managing apparatus; and

a transmission requesting part that requests the managing apparatus to transmit the first software to the intermediary apparatus when the update date 10 and time stored in the storage part is reached.

15 24. The intermediary apparatus as claimed in claim 23, wherein the software transmitting part comprises a communication requesting part that makes a request to the one of the electronic apparatuses for communication with the intermediary apparatus 20 before transmitting the first software stored in the storage part to the one of the electronic apparatuses, and transmits the first software stored in the storage part to the one of the electronic apparatuses when receiving a response to said request therefrom.

25. The intermediary apparatus as claimed in claim 23, further comprising:

a status checking part that checks a status of the one of the electronic apparatuses; and

5 an update date and time changing part that changes the update date and time stored in the storage part so that a start of updating of the second software is deferred for a predetermined period of time when it is determined based on a 10 result of the checking by the status checking part that the one of the electronic apparatuses is prevented from starting the updating of the second software immediately.

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26. The intermediary apparatus as claimed in claim 23, further comprising an update date and 20 time changing part that changes the update date and time stored in the storage part so that a start of updating of the second software is deferred for a predetermined period of time when receiving a request to defer the updating of the second software from 25 outside the intermediary apparatus.

27. The intermediary apparatus as claimed
in claim 26, wherein the software transmitting part
comprises a part that stops the transmission of the
first software to the one of the electronic
5 apparatuses when the transmission is prevented from
being completed by a preset expiration date and time.

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28. The intermediary apparatus as claimed
in claim 20, wherein:

the software writing part writes the first
software and an update date and time to the storage
15 part when receiving the first software and the update
date and time from the managing apparatus; and

the software transmitting part transmits the
first software stored in the storage part to the one
of the electronic apparatuses which one requires the
20 second software thereof to be updated when the update
date and time stored in the storage part is reached.

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29. The intermediary apparatus as claimed
in claim 28, wherein the software transmitting part
comprises a communication requesting part that makes
a request to the one of the electronic apparatuses
5 for communication with the intermediary apparatus
before transmitting the first software stored in the
storage part to the one of the electronic apparatuses,
and transmits the first software stored in the
storage part to the one of the electronic apparatuses
10 when receiving a response to said request therefrom.

15 30. The intermediary apparatus as claimed
in claim 28, further comprising:
a status checking part that checks a status
of the one of the electronic apparatuses; and
an update date and time changing part that
20 changes the update date and time stored in the
storage part so that a start of updating of the
second software is deferred for a predetermined
period of time when it is determined based on a
result of the checking by the status checking part
25 that the one of the electronic apparatuses is

prevented from starting the updating of the second software immediately.

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31. The intermediary apparatus as claimed in claim 28, further comprising an update date and time changing part that changes the update date and 10 time stored in the storage part so that a start of updating of the second software is deferred for a predetermined period of time when receiving a request to defer the updating of the second software from outside the intermediary apparatus.

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32. The intermediary apparatus as claimed 20 in claim 31, wherein the software transmitting part comprises a part that stops the transmission of the first software to the one of the electronic apparatuses when the transmission is prevented from being completed by a preset expiration date and time.

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33. The intermediary apparatus as claimed in claim 20, further comprising a status checking part that checks a status of the one of the electronic apparatuses; and

5 the software transmitting part comprises an updating necessity determining part that determines whether updating of the second software of the one of the electronic apparatuses has normally ended based on a result of the checking by the status checking part, and repeats the transmission of the first 10 software stored in the storage to the one of the electronic apparatuses until the updating necessity determining part determines that the updating of the second software of the one of the electronic 15 apparatuses has normally ended.

20 34. The intermediary apparatus as claimed in claim 33, wherein the updating necessity determining part determines that the updating of the second software of the one of the electronic apparatuses has normally ended when receiving a 25 power-on report indicating that power is turned on

from the one of the electronic apparatuses

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35. The intermediary apparatus as claimed in claim 33, wherein the software transmitting part comprises a part that stops the transmission of the first software to the one of the electronic 10 apparatuses when the transmission is prevented from being completed by a preset expiration date and time.

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36. A software updating method in an intermediary apparatus connected to a managing apparatus via a communication line so as to control communication between the managing apparatus and one 20 or more electronic apparatuses managed remotely by the managing apparatus, the software updating method comprising the steps of:

(a) writing an update date and time to a storage part of the intermediary apparatus when the 25 update date and time is received from the managing

apparatus;

(b) requesting the managing apparatus to transmit software to the intermediary apparatus when the update date and time in the storage part is 5 reached; and

(c) writing the software to the storage part when the software transmitted in response to said step (b) from the managing apparatus is acquired, transmitting the software in the storage part to at 10 least one of the electronic apparatuses which one requires software thereof to be updated, and causing the one of the electronic apparatuses to update the software thereof.

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37. The software updating method as claimed in claim 36, further comprising the step of:

20 (d) checking a status of the one of the electronic apparatuses; and

(e) changing the update date and time stored in the storage part so that a start of the updating of the software is deferred for a predetermined 25 period of time when it is determined based on a

result of the checking by said step (d) that the one of the electronic apparatuses is prevented from starting the updating of the software immediately.

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38. The software updating method as claimed in claim 36, further comprising the step of (d)
10 changing the update date and time stored in the storage part so that a start of the updating of the software is deferred for a predetermined period of time when receiving a request to defer the updating of the software from outside the intermediary
15 apparatus.

20 39. The software updating method as claimed in claim 36, further comprising the steps of:
 (d) checking a status of the one of the electronic apparatuses; and
 (e) repeating the transmission of the
 25 software stored in the storage to the one of the

electronic apparatuses until it is determined based on a result of the checking by said step (d) that the updating of the software of the one of the electronic apparatuses has normally ended.

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40. The software updating method as claimed
10 in claim 39, further comprising the step of (f)
stopping the transmission of the software to the one
of the electronic apparatuses when the transmission
is prevented from being completed by a preset
expiration date and time.

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41. A software updating method in an
20 intermediary apparatus connected to a managing
apparatus via a communication line so as to control
communication between the managing apparatus and one
or more electronic apparatuses managed remotely by
the managing apparatus, the software updating method
25 comprising the steps of:

(a) writing software and an update date and time to a storage part of the intermediary apparatus when the software and the update date and time are received from the managing apparatus; and

5 (b) transmitting the software in the storage part to at least one of the electronic apparatuses which one requires software thereof to be updated and causing the one of the electronic apparatuses to update the software thereof when the update date and
10 time in the storage part is reached.

15 42. The software updating method as claimed in claim 41, further comprising the step of:

(c) checking a status of the one of the electronic apparatuses; and

(d) changing the update date and time stored
20 in the storage part so that a start of the updating of the software is deferred for a predetermined period of time when it is determined based on a result of the checking by said step (c) that the one of the electronic apparatuses is prevented from
25 starting the updating of the software immediately.

43. The software updating method as claimed in claim 41, further comprising the step of (c) changing the update date and time stored in the storage part so that a start of the updating of the 5 software is deferred for a predetermined period of time when receiving a request to defer the updating of the software from outside the intermediary apparatus.

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44. The software updating method as claimed in claim 41, further comprising the steps of:
15 (c) checking a status of the one of the electronic apparatuses; and
(d) repeating the transmission of the software stored in the storage to the one of the electronic apparatuses until it is determined based 20 on a result of the checking by said step (c) that the updating of the software of the one of the electronic apparatuses has normally ended.

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45. The software updating method as claimed in claim 44, further comprising the step of (e) stopping the transmission of the software to the one of the electronic apparatuses when the transmission 5. is prevented from being completed by a preset expiration date and time.

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46. A software updating method in an intermediary apparatus connected to a managing apparatus via a communication line so as to control communication between the managing apparatus and one 15 or more electronic apparatuses managed remotely by the managing apparatus, the software updating method comprising the steps of:

(a) writing first software to a storage part of the intermediary apparatus when the first software 20 is received from the managing apparatus; and

(b) transmitting the first software stored in the storage part to one of the electronic apparatuses each storing second software therein which one requires the second software to be updated.

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47. The software updating method as claimed in claim 46, wherein, when two or more of the electronic apparatuses require the second software stored therein to be updated, said step (b) transmits 5 the first software to each of the two or more of the electronic apparatuses.

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48. The software updating method as claimed in claim 47, wherein
the first software comprises software programs of different types;
15 the second software differs in type between two or more of the electronic apparatuses; and
said step (b) transmits two or more of the software programs of the first software to the two or more of the electronic apparatuses in accordance with
20 the types of the second software thereof.

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49. The software updating method as claimed

in claim 46, further comprising the steps of:

(c) writing an update date and time to the storage part when the update date and time is received from the managing apparatus; and

5 (d) requesting the managing apparatus to transmit the first software to the intermediary apparatus when the update date and time stored in the storage part is reached.

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50. The software updating method as claimed in claim 49, wherein said step (b) comprises the step
15 of (e) making a request to the one of the electronic apparatuses for communication with the intermediary apparatus before transmitting the first software stored in the storage part to the one of the electronic apparatuses, and transmits the first
20 software stored in the storage part to the one of the electronic apparatuses when a response to said request is received therefrom.

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51. The software updating method as claimed in claim 49, further comprising the steps of:

(e) checking a status of the one of the electronic apparatuses; and

5 (f) changing the update date and time stored in the storage part so that a start of updating of the second software is deferred for a predetermined period of time when it is determined based on a result of the checking by said step (e) that the one 10 of the electronic apparatuses is prevented from starting the updating of the second software immediately.

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52. The software updating method as claimed in claim 49, further comprising the step of (e) changing the update date and time stored in the 20 storage part so that a start of updating of the second software is deferred for a predetermined period of time when a request to defer the updating of the second software is received from outside the intermediary apparatus.

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53. The software updating method as claimed
in claim 52, wherein said step (b) comprises the step
of (f) stopping the transmission of the first
software to the one of the electronic apparatuses
5 when the transmission is prevented from being
completed by a preset expiration date and time.

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54. The software updating method as claimed
in claim 46, wherein:

15 said step (a) writes the first software and
an update date and time to the storage part when the
first software and the update date and time are
received from the managing apparatus; and

20 said step (b) transmits the first software
stored in the storage part to the one of the
electronic apparatuses which one requires the second
software thereof to be updated when the update date
and time stored in the storage part is reached.

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55. The software updating method as claimed in claim 54, wherein said step (b) comprises the step of (c) making a request to the one of the electronic apparatuses for communication with the intermediary apparatus before transmitting the first software stored in the storage part to the one of the electronic apparatuses, and transmits the first software stored in the storage part to the one of the electronic apparatuses when a response to said request is received therefrom.

15 56. The software updating method as claimed in claim 54, further comprising the steps of:
(c) checking a status of the one of the electronic apparatuses; and
(d) changing the update date and time stored
20 in the storage part so that a start of updating of the second software is deferred for a predetermined period of time when it is determined based on a result of the checking by said step (c) that the one of the electronic apparatuses is prevented from
25 starting the updating of the second software

immediately.

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57. The software updating method as claimed
in claim 54, further comprising the step of (c)
changing the update date and time stored in the
storage part so that a start of updating of the
10 second software is deferred for a predetermined
period of time when a request to defer the updating
of the second software is received from outside the
intermediary apparatus.

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58. The software updating method as claimed
in claim 57, wherein said step (b) comprises the step
20 of stopping the transmission of the first software to
the one of the electronic apparatuses when the
transmission is prevented from being completed by a
preset expiration date and time.

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59. The software updating method as claimed in claim 46, further comprising the step of (c) checking a status of the one of the electronic apparatuses,

5 wherein said step (b) comprises the step of (d) determining whether updating of the second software of the one of the electronic apparatuses has normally ended based on a result of the checking by said step (c), and repeats the transmission of the 10 first software stored in the storage to the one of the electronic apparatuses until said step (d) determines that the updating of the second software of the one of the electronic apparatuses has normally ended.

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60. The software updating method as claimed 20 in claim 59, wherein said step (d) determines that the updating of the second software of the one of the electronic apparatuses has normally ended when a power-on report indicating that power is turned on is received from the one of the electronic apparatuses

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61. The software updating method as claimed in claim 59, wherein said step (b) comprises the step of (e) stopping the transmission of the first software to the one of the electronic apparatuses 5 when the transmission is prevented from being completed by a preset expiration date and time.

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62. A computer-readable recording medium recording a program for causing a computer to execute a software updating method in an intermediary apparatus connected to a managing apparatus via a 15 communication line so as to control communication between the managing apparatus and one or more electronic apparatuses managed remotely by the managing apparatus, the software updating method comprising the steps of:

20 (a) writing first software to a storage part of the intermediary apparatus when the first software is received from the managing apparatus; and
(b) transmitting the first software stored in the storage part to one of the electronic 25 apparatuses each storing second software therein

which one requires the second software to be updated.

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63. The computer-readable recording medium as claimed in claim 62, wherein, when two or more of the electronic apparatuses require the second software stored therein to be updated, said step (b) 10 transmits the first software to each of the two or more of the electronic apparatuses.

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64. The computer-readable recording medium as claimed in claim 63, wherein the first software comprises software programs of different types; 20 the second software differs in type between two or more of the electronic apparatuses; and said step (b) transmits two or more of the software programs of the first software to the two or more of the electronic apparatuses in accordance with 25 the types of the second software thereof.

65. The computer-readable recording medium as claimed in claim 62, wherein the software updating method further comprises the steps of:

5 (c) writing an update date and time to the storage part when the update date and time is received from the managing apparatus; and

10 (d) requesting the managing apparatus to transmit the first software to the intermediary apparatus when the update date and time stored in the storage part is reached.

15 66. The computer-readable recording medium as claimed in claim 65, wherein said step (b) comprises the step of (e) making a request to the one of the electronic apparatuses for communication with the intermediary apparatus before transmitting the first software stored in the storage part to the one of the electronic apparatuses, and transmits the first software stored in the storage part to the one of the electronic apparatuses when a response to said request is received therefrom.

67. The computer-readable recording medium as claimed in claim 65, wherein the software updating method further comprises the steps of:

(e) checking a status of the one of the 5 electronic apparatuses; and

(f) changing the update date and time stored in the storage part so that a start of updating of the second software is deferred for a predetermined period of time when it is determined based on a 10 result of the checking by said step (e) that the one of the electronic apparatuses is prevented from starting the updating of the second software immediately.

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68. The computer-readable recording medium as claimed in claim 65, wherein the software updating 20 method further comprises the step of (e) changing the update date and time stored in the storage part so that a start of updating of the second software is deferred for a predetermined period of time when a request to defer the updating of the second software 25 is received from outside the intermediary apparatus.

69. The computer-readable recording medium
as claimed in claim 68, wherein said step (b)
comprises the step of (f) stopping the transmission
of the first software to the one of the electronic
5 apparatuses when the transmission is prevented from
being completed by a preset expiration date and time.

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70. The computer-readable recording medium
as claimed in claim 62, wherein:
said step (a) writes the first software and
an update date and time to the storage part when the
15 first software and the update date and time are
received from the managing apparatus; and
said step (b) transmits the first software
stored in the storage part to the one of the
electronic apparatuses which one requires the second
20 software thereof to be updated when the update date
and time stored in the storage part is reached.

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71. The computer-readable recording medium as claimed in claim 70, wherein said step (b) comprises the step of (c) making a request to the one of the electronic apparatuses for communication with 5 the intermediary apparatus before transmitting the first software stored in the storage part to the one of the electronic apparatuses, and transmits the first software stored in the storage part to the one of the electronic apparatuses when a response to said 10 request is received therefrom.

15 72. The computer-readable recording medium as claimed in claim 70, wherein the software updating method further comprises the steps of:

(c) checking a status of the one of the electronic apparatuses; and

20 (d) changing the update date and time stored in the storage part so that a start of updating of the second software is deferred for a predetermined period of time when it is determined based on a result of the checking by said step (c) that the one 25 of the electronic apparatuses is prevented from

starting the updating of the second software immediately.

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73. The computer-readable recording medium as claimed in claim 70, wherein the software updating method further comprises the step of (c) changing the 10 update date and time stored in the storage part so that a start of updating of the second software is deferred for a predetermined period of time when a request to defer the updating of the second software is received from outside the intermediary apparatus.

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74. The computer-readable recording medium 20 as claimed in claim 73, wherein said step (b) comprises the step of stopping the transmission of the first software to the one of the electronic apparatuses when the transmission is prevented from being completed by a preset expiration date and time.

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75. The computer-readable recording medium
as claimed in claim 62, wherein:

the software updating method further
comprises the step of (c) checking a status of the
5 one of the electronic apparatuses; and
said step (b) comprises the step of (d)
determining whether updating of the second software
of the one of the electronic apparatuses has normally
ended based on a result of the checking by said step
10 (c), and repeats the transmission of the first
software stored in the storage to the one of the
electronic apparatuses until said step (d) determines
that the updating of the second software of the one
of the electronic apparatuses has normally ended.

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76. The computer-readable recording medium
20 as claimed in claim 75, wherein said step (d)
determines that the updating of the second software
of the one of the electronic apparatuses has normally
ended when a power-on report indicating that power is
turned on is received from the one of the electronic
25 apparatuses

77. The computer-readable recording medium
as claimed in claim 75, wherein said step (b)
comprises the step of (e) stopping the transmission
of the first software to the one of the electronic
5 apparatuses when the transmission is prevented from
being completed by a preset expiration date and time.

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78. A program for causing a computer to
execute a software updating method in an intermediary
apparatus connected to a managing apparatus via a
communication line so as to control communication
15 between the managing apparatus and one or more
electronic apparatuses managed remotely by the
managing apparatus, the software updating method
comprising the steps of:

(a) writing first software to a storage part
20 of the intermediary apparatus when the first software
is received from the managing apparatus; and
(b) transmitting the first software stored
in the storage part to one of the electronic
apparatuses each storing second software therein
25 which one requires the second software to be updated.